

Preparation of three-in-one thin-layer hydrophobic catalyst electrode and membrane electrode assembly

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The preparation method of thin-layer hydrophobic catalytic layer electrode and membrane electrode. The method includes: (1) the catalyst is dispersed in the organic solvent to form a catalyst ink; (2) directly or indirectly printed on the proton film to form membrane electrode three-in-one component. The composition of said ink includes (1) catalyst; (2) solvent made up by mixing water and organic solvent, the volume ratio of water and organic solvent is 1:1-10; (3) Nafion or Flemion proton conductor polymer; (4) soluble and volatile pore-forming agent; and (5) hydrophobic agent, and their weight ratio is 10:100-500:1-10:10-80:1-10. Said invention is simple in preparation and its electrode performance is excellent and life is long.

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